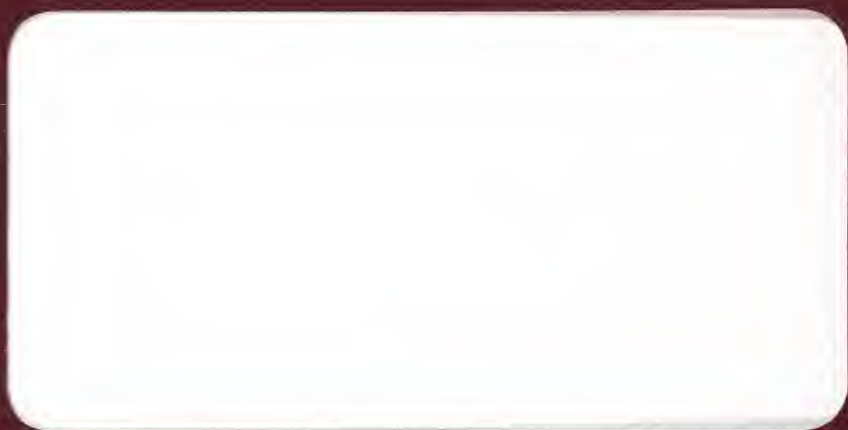Competitive Assessment of

Telephony
Software Companies

Competitive Assessment of

Telephony Software Companies

Prepared for

Cincinnati Bell
Information Systems

Prepared by

INPUT
October 1989

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I. Introduction

INPUT, an international information services market research and consulting firm, has conducted a study for Cincinnati Bell Information Systems (CBIS) to prepare profiles on two telephony software vendors identified by CBIS.

A
Objectives

The objective of this research study is to develop a written profile for selected telephony software vendors. The target products are service order, billing, and outside plant.

The vendor profile contains the following information (collected on a "best efforts" basis):

1.   Functional characteristics

2.   Planned future capabilities (new products, major enhancements)

3.   Installed base

4.   Names of clientele and product purchases

5.   Software/hardware platform requirements

6.   Modules included, optional modules

7.   Significant product differentiating features

8.   Product weakness

9.   Perceived market position

10.   Identification of significant competitors

11.   Basic pricing information

12.   Detailed pricing information

13.   Items included in the price (i.e. maintenance, training)

14.   Distribution channels

15.   Geographic or market limitations

16.   Sales forecast

INPUT prepared profiles on the following two companies:

1.   Data Products International, Inc.
      Sugar Land, Texas

2.   Miror Telephony Software, Inc.
      Charlotte, North Carolina

B

Research Methodology

The research process consists of conducting telephone interviews with the two companies and supplementing this information with product literature received from the vendors. Preliminary research indicated that both firms are small, privately-held companies, and possibly present a high level of difficulty with regards to obtaining information.

INPUT initially contacted the two companies and requested product literature. Miror Telephony Software sent product brochures on most of their products, but did not send information on their service order and billing systems. INPUT called the company to request this information. A company spokeswoman stated that the company had exhausted copies of glossy product literature and that she would mail copies. However, this information was not received. When INPUT again contacted the company, the spokeswoman expressed her inability to provide this information. INPUT then interviewed a company executive to obtain information on the company.

After reviewing information received from Data Products, Inc., INPUT contacted the company for a telephone interview. The interview could not be completed; a company executive stated his reluctance to provide more information on his company unless he knew more about INPUT. INPUT followed up by sending a packet of information, but no further information could be obtained from the company.

II. Vendor Profiles

A

Data Products, Inc.
P. O. Box 1176
Sugar Land, Texas 77487
(713) 491-7200

Introduction

Data Products, Inc. (DPI) was initially formed as a privately-held company. In 1983 the company was acquired by one of its customers, Sugar Land Telephone (SLT) Company. This acquisition provided capital to DPI for further development of its software products. Today the company is part of a communications family of four independent telcos, including Sugar Land Telephone Company, and describes itself as "affiliated with Sugar Land Telephone Company", a member of SLT Communications, Inc.

The company's flagship product is the DPI "Telco-Friendly"^{R} Software System. The company has been designing and upgrading this system since 1979. Over 35 people are dedicated to product development.

DPI is an approved IBM Industry Remarketer.

Product Information

1. Functional Characteristics, Modules Included, Optional Modules

DPI's primary product is the DPI "Telco-Friendly" Software System. The basic system consists of the following three application modules:

> Service orders
> Commercial billing
> Plant assignment and administration

Eleven optional modules are offered:

> Trouble reporting
> Inventory management

> Payroll/labor distribution
> WATS billing and rating
> Carrier access billing system (CABS)
> Accounts payable
> General ledger
> Work orders accounting
> Continuing property records
> Toll center rating
> Access usage records (AURs)

All DPI applications are based on a user-defined, control record driven, centralized data base. The company claims that this allows for maximum flexibility of data management and design, and also enables the customer to have access to data through the use of fourth generation query software packages. The centralized data base helps reduce the required disk storage, eliminates the need for keeping redundant data, and provides for more accurate editing and cross-checking of information entries through the built-in, on-line data entry validation processes.

System features include the following:

> Integrated on-line processing
> Access to current system information
> Immediate data entry/updating
> Simultaneous on-line access for multiple users
> Menu-driven and messages using telco jargon
> Efficient sharing of common data base
> Automatic data checking to reduce operator errors
> Comprehensive reports with user-selectable options
> Extensive audit trails

The following activity reports are available on the system:

> Service and equipment item
> Service and equipment category
> Service and equipment class
> Phone number
> Service order
> Service order type
> Exchange
> Account number
> Charge code
> Toll jurisdiction (i.e. intra/interstate lata)
> Bill cycle
> Company

2. Software/Hardware Platform Requirements

The DPI "Telco-Friendly" Software System is designed to operate on the IBM AS/400 mid-range computer. The system will run on any configuration available on the AS/400. Certain factors must be considered when determining system configuration requirements.

With respect to telephone switch interfaces, DPI offers the following ticketing equipment format interfaces:

> Automatic Electric #1 EAX
> Automatic Electric #2 EAX
> Automatic Electric #5 EAX
> SATT
> SPI
> NEAX
> NEC
> Northern Telecom DMS-10
> Northern Telecom DMS-100
> Northern Telecom DMS-200
> Stromberg-Carlson (All)
> ALCATEL

DPI "Telco-Friendly" Software System is written in RPG/400, a superset of RPG III on the IBM System/38, and the System AS/400 command language.

The company's present policy is to provide the source code for each DPI software application licensed. Source code is not provided for DPI special utility programs.

3. Significant Product Differentiating Features

DPI feels that its major strength lies in its approach in designing the software. The customer record forms the foundation on which the different applications are built, resulting in a comprehensive integrated system. Further, the system is menu-driven and is easy to use.

4. Planned Future Capabilities (New products, major enhancements)

The company has not introduced any new products or significant enhancements to its product line. No new applications are planned for the near future.

5. Pricing

Basic pricing information is unavailable.

Software training: DPI charges $650/day for five people at the customer's site and $550/day for five people at the company's headquarters.

In addition to software training, DPI offers implementation assistance, ongoing monthly support with a customer service hotline, consulting, and custom programming.

Marketing Information

6. Markets Served, Perceived Market Position

The company's primary market is telephone companies. While a company brochure states that the company will offer its systems to "large industrial facilities, government installations, large office/multi-use properties as well as health care, financial, and educational institutions," a company executive stated that there were no plans to reach these markets.

7. Installed Base

DPI has licensed its software systems to 73 telcos; 65 are located in the United States, and the remaining 8 are located overseas in the Bahamas, Virgin Islands, Guam, Saipan, Curacao and New Zealand.

8. Sales Forecast

This information is unavailable.

9. Distribution Channels

DPI uses a direct sales force to distribute its software systems. The company does not have any distributors.

10. Significant Competitors

The company feels that its product is unique and does not think it has any competitors.

B

Miror Telephony Software, Inc.

P.O. Box 11085
3229 South Blvd.
Charlotte, North Carolina 28220
(704) 525-9870

Introduction

Miror Telephony Software, Inc. traces its roots to the Mid-South Consulting
Engineers, Inc., a management and engineering consulting firm formed in 1960 to
serve telephone companies exclusively. The consulting business grew and led to
the company developing and marketing software products. The software side of
the business was spun off from a separate company—Miror Telephony Software—
in 1987. Today these two companies are organized under a holding company called
the Mid-South Enterprises Company.

Miror Telephony Software and Mid-South Consulting Engineers together have 85
employees. Employees are moved back and forth between the two companies,
depending upon the business requirements.

In addition to corporate headquarters at Charlotte, North Carolina, the company has
an office in Raleigh-Durham, North Carolina, and is examining the possibility of
opening an office in Chicago.

Product Information

1. Functional Characteristics, Modules Included, Optional Modules

Miror's Access Network Management System is a comprehensive integrated system
serving all access network operations and engineering functions. It was developed
by telephone plant and engineering professionals.

Miror's products are described in the table below:

Access Network Processor	Automatic assignment and control system for the central office and outside plant. Replaces cable records, line cards, and dial office records.

Improves efficiency of plant from five to twenty percent.
Automatically selects least-cost assignments.

Engineering Products

AcNet Design

Comprehensive and flexible system for forecasting and designing new facilities.

AcNet Cutover

Faster implementation of newly-constructed facilities and elimination of problems previously associated with new facility rearrangements.

MirorCAD

A low-cost, low-risk way of introducing computer-aided drafting to telephone engineering.

Service Center Products

Service Order Processing

On-line entry of commercial service orders with interactive interface to access network processor.

Trouble Report Processing

On-line trouble reporting and dispatching. Provides analysis of trouble reports and trouble clearing performance.

Test Interface

Automatic testing of subscriber lines. Works with test heads of four manufacturers.

Miror's flagship product is the Access Network Processor. The company's products, described above, are available as standalone independent products or as optional add-on modules.

2. Software/Hardware Platform Requirements

Miror's systems are available on the DEC VAX/VMS, and on systems supporting UNIX System V and IBM's AIX operating systems.

3. Significant Product Differentiating Features

All the company's products are developed based on a common single data base. When this data base is updated, all modules are updated at the same time. The company feels that this is in contrast to other products in the market that feature data bases built around departmental structures, a phenomenon very common in the telephone company industry.

Miror's major strength lies in its telephony consulting background. The company is telephone-oriented rather than computer-oriented. The company primarily employs people with a telecommunications background rather than a computer background.

4. Planned Future Capabilities (New products, major enhancements)

Miror plans to introduce two new products in the early part of 1990, Test System Interface and Switch System Interface.

The Test System Interface automatically interfaces with the trouble reporting system. Miror supports three test head vendors: Microcomputer Systems, Northern Telecom, and R-Tec Test System Division. The company has signed special agreements with these three vendors. Miror claims that it is the only company in the world that supports multivendor test heads.

The Switch System Interface allows the user to automatically update digital switches with service order activity. Miror supports all the major digital switches.

5. Pricing

Miror's systems are available as turnkey systems that include both hardware and software. The company also markets software, particularly to those users who have extensive hardware installations.

The company's products are priced on a flat rate, plus cost per line. Pricing information is unavailable.

Marketing Information

6. Markets Served, Perceived Market Position

The company's primary market is telephone companies. All of the company's customers are located in the U.S. Miror is currently negotiating with a couple of private networks, but to date has not sold any. Miror considers itself to be the premier supplier of integrated systems to the industry it serves and the only company that is successful in that market.

7. Installed Base

Miror has over two million lines being served by its systems. There are over 130 customer sites. A breakdown by hardware/software platform is as follows:

IBM AIX (PS/2, RT, 370)	70
DEC VAX/VMS	10
Honeywell Bull	30
Texas Instruments	20
UNIX	---

The Honeywell Bull systems were the result of a special request by a large company. The company does not normally offer these systems. Also, Miror no longer offers systems based on Texas Instruments hardware. The company continues to support existing installations that feature a 16-bit computer. UNIX-based systems are a brand-new introduction, and so far the company has not sold any.

8. Sales Forecast

Over the last three years the company has grown between 75 and 100 percent. Miror anticipates sustaining this high growth over the next year.

The company has added 20 new customers per year over the last three years. In the recent past, the number of customer accounts has slowed but the size of the customer in terms of number of lines has gotten much bigger. For example, Miror has gone from serving a company with 2 million lines to a company with 17 million lines. Miror is not dealing with the smaller independents and feels that future growth is likely to come from the bigger holding companies such as the RBOCs, and companies like GTE, Contel, Centel, etc.

9. Distribution Channels

Miror employs a direct sales force to market its systems. The company does not use distributors. Miror is currently negotiating with a very large firm that plans to distribute its products in Europe. Negotiations with this large company are in progress, according to a company executive who declined to provide further information.

Miror has marketing alliances with two companies, ADS (South Carolina) and Abacus (Mississippi). ADS develops a service order and billing system. Abacus develops an integrated system for billing, accounting, and service orders. Miror markets the systems developed by these two companies. These companies, in turn, have marketing rights on some of Miror's modules.

10. Significant Competitors

At the high end, Miror competes against CBIS and Lucas (Auxco), and at the low end Miror encounters Data Products, Inc. Miror thinks that there are very few aggressive players in this market. The company feels that the products of numerous software vendors are out-of-date and that these companies live off the maintenance revenues generated by their existing client base.

On CBIS, a company executive stated, "CBIS has been trying to sell aggressively in the recent past but they haven't been very successful. We have found ourselves in a competitive situation against them numerous times but no time have they won against us. They are just not really good marketers or responsive to the customer."